

# V&V Reference Report

## L2 ASCDS Version : 10.9.1

Observation 5689 - L2 Version 4  
Chandra X-Ray Center

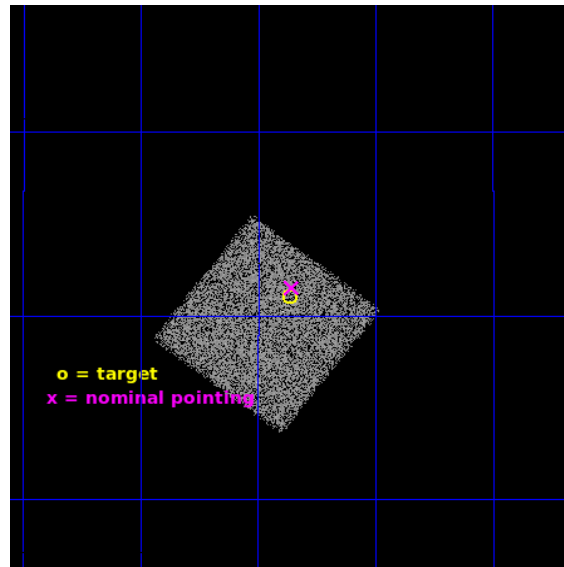
L2 Processing Date : Oct 6 2020

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# 1 Front

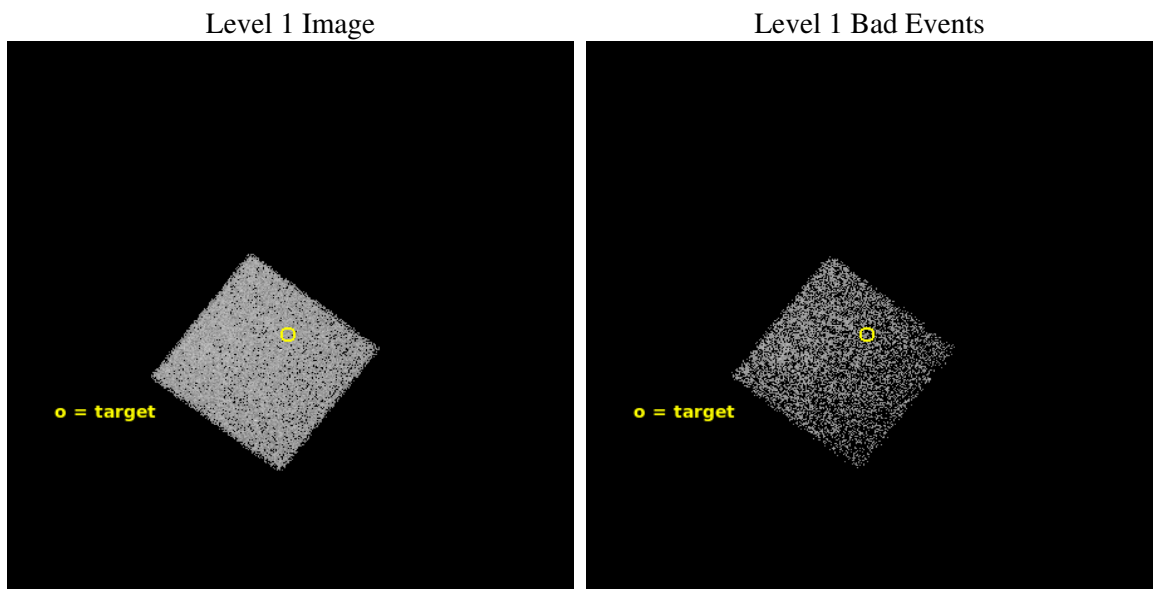
|          |                            |  |
|----------|----------------------------|--|
| seq_num  | 701112                     | Sequence number                          |
| obs_id   | 5689                       | Observation id                           |
| title    | Bringing in the Last SHEEP | Proposal title                           |
| observer | Prof Kirpal Nandra         | Principal investigator                   |
| object   | AX J1241.3+3501            | Source name                              |
| dtcycle  | 0                          | &#160                                    |
| cycle    | P                          | events from which exps? Prim/Second/Both |
| ra_targ  | 190.340417                 | Observer's specified target RA [deg]     |
| dec_targ | 35.016944                  | Observer's specified target Dec [deg]    |
| ra_nom   | 190.33899586209            | Nominal RA [deg]                         |
| dec_nom  | 35.025531522814            | Nominal Dec [deg]                        |
| roll_nom | 127.46899085135            | Nominal Roll [deg]                       |
| revision | 4                          | Processing version of data               |
| ontime   | 5081.5999810696            | Sum of GTIs [s]                          |
| livetime | 5017.2537023371            | Livetime [s]                             |
| ontime7  | 5081.5999810696            | Sum of GTIs [s]                          |
| l2events | 20431                      | Number of level 2 events                 |



## 2 OBI

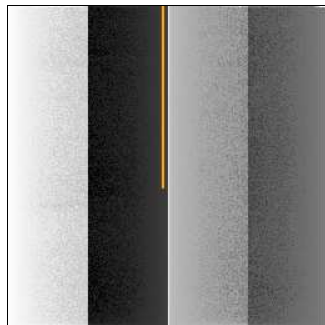
### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias

Chip 7



### 2.1.3 Parameters

|          |                     |                                |                |                 |   |
|----------|---------------------|--------------------------------|----------------|-----------------|---|
| obi_num  | 0                   | Obi number                     | sched_exp_time | 5000.000000     | [s] Scheduled observation exposure time |
| ascdsver | 10.9.1              | Processing system revision     | ontime         | 5081.5999810696 | Sum of GTIs [s]                         |
| caldsver | 4.9.2               | &#160                          | ontime7        | 5081.5999810696 | Sum of GTIs [s]                         |
| date     | 2020-10-06T22:49:44 | Date and time of file creation | l1events       | 49717           | Number of level 1 events                |
| revision | 4                   | Processing version of data     |                |                 |   |

### 2.1.4 Events

|                 |              |
|-----------------|--------------|
|                 | <b>ccd 7</b> |
| level 1 events  | 49717        |
| rejected events | 28685        |
| rejected %      | 57%          |

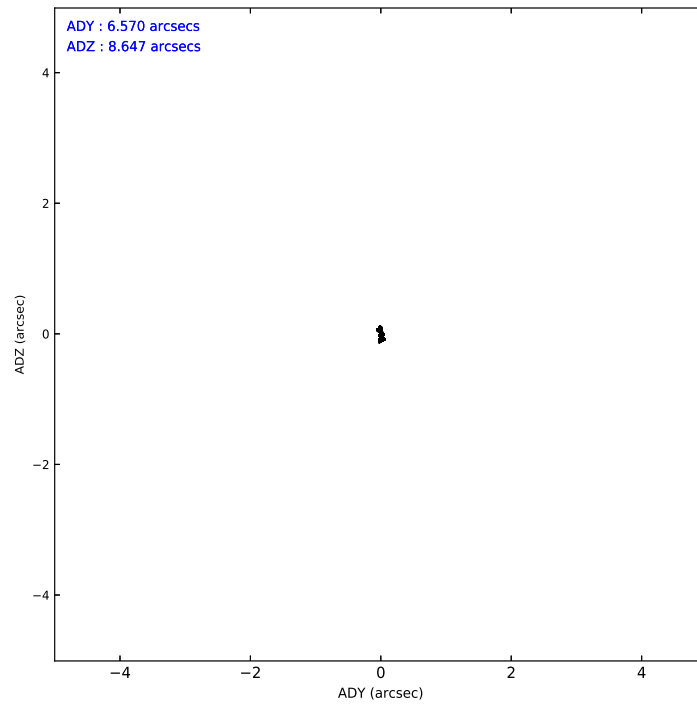
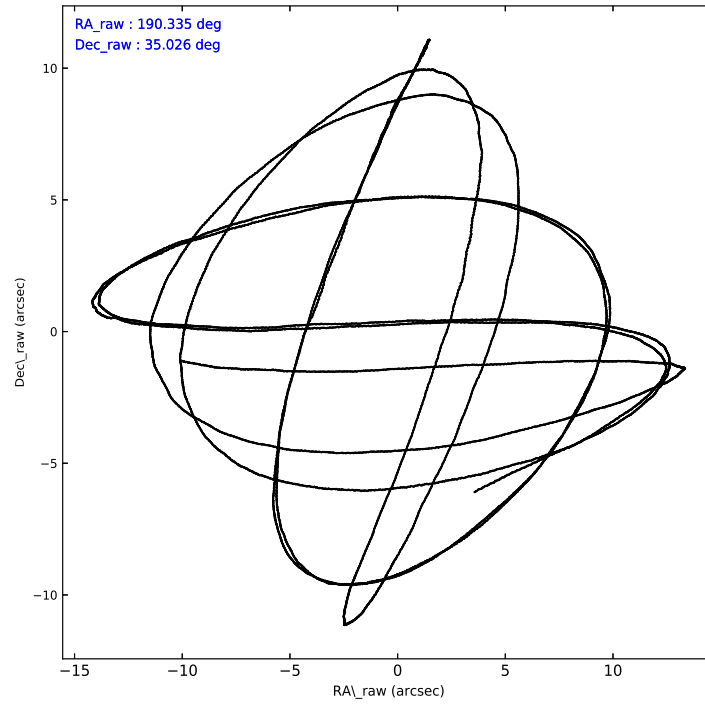
|                |              |
|----------------|--------------|
|                | <b>ccd 7</b> |
| grade 0 events | 1888         |
|                | 3%           |
| grade 1 events | 38           |
|                | 0%           |
| grade 2 events | 4279         |
|                | 8%           |
| grade 3 events | 1837         |
|                | 3%           |
| grade 4 events | 1824         |
|                | 3%           |
| grade 5 events | 4674         |
|                | 9%           |
| grade 6 events | 11231        |
|                | 22%          |
| grade 7 events | 23946        |
|                | 48%          |

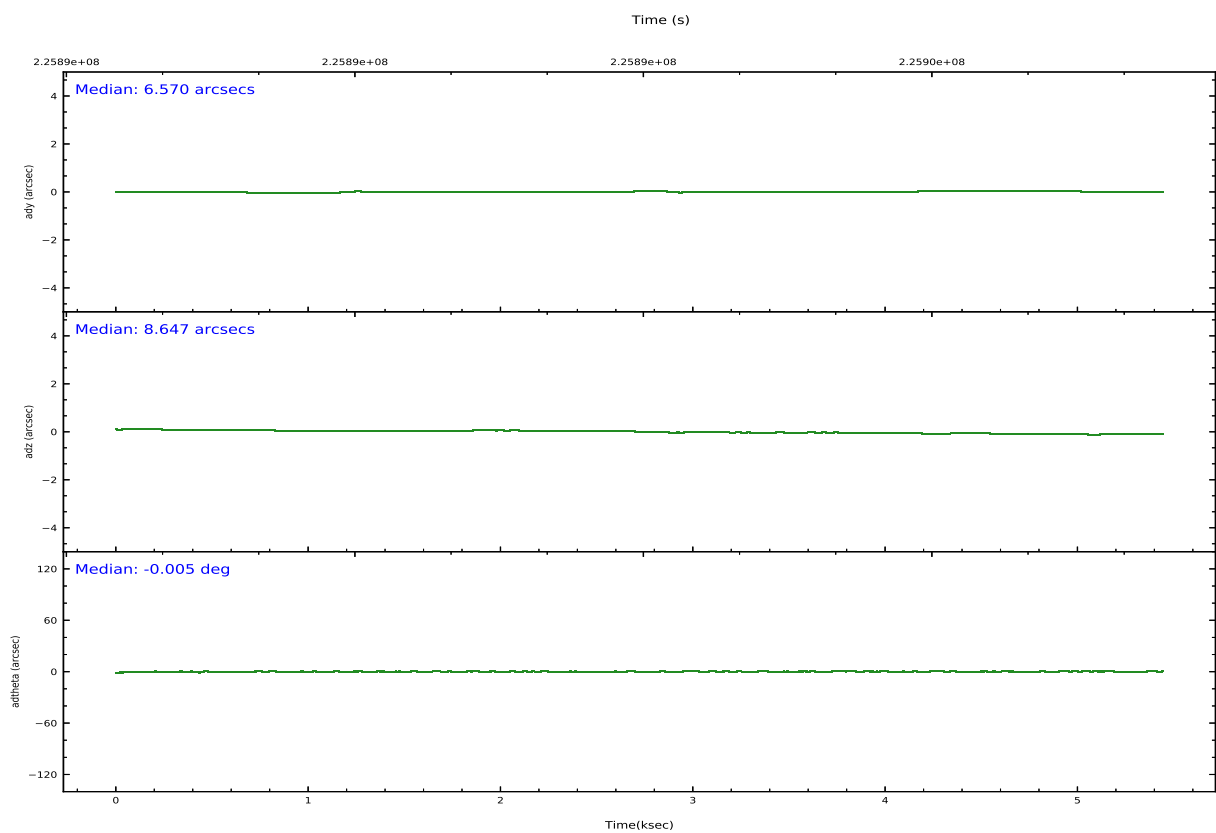
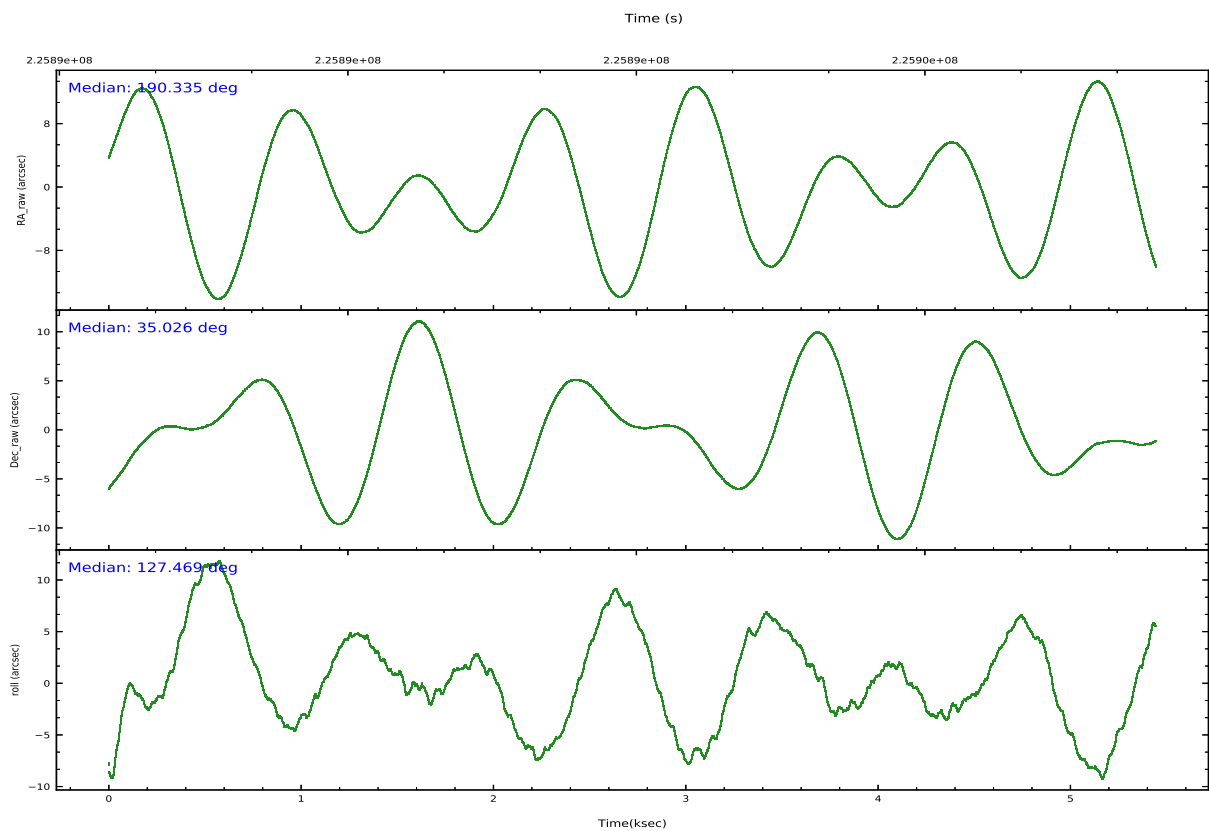


## 2.2 Compared Parameters

| Parameter                         | Planned             | Actual               | Parameter                             | Planned   | Actual  |
|-----------------------------------|---------------------|----------------------|---------------------------------------|-----------|---------|
| Instrument                        | ACIS                | ACIS                 | Obspar version number                 | 8         | 8       |
| Detector                          | ACIS-7              | ACIS-7               | Obspar file type                      | PREDICTED | ACTUAL  |
| Grating                           | NONE                | NONE                 | Obspar update status                  | NONE      | UPDATED |
| Data mode                         | FAINT               | FAINT                | Number of optional ACIS chips dropped | 0         | 0       |
| Observation mode                  | POINTING            | POINTING             | On-chip summing requested             | N         | N       |
| [deg] Pointing RA                 | 190.365871          | 190.33899586209      | Subarray requested                    | NONE      | NONE    |
| [deg] Pointing Dec                | 35.015442           | 35.025531522814      | Alternating exposures requested       | N         | N       |
| [deg] Pointing Roll               | 127.296955          | 127.46899085135      | [s] Primary exposure time             | 0.000000  | 3.2     |
| [mm] SIM focus pos                | -0.684267           | -0.6828225247311905  |                                       |           |         |
| [mm] SIM defocus                  | 0                   | 0.001444936568705701 |                                       |           |         |
| [mm] SIM translation stage pos    | -190.132523         | -190.1425803651734   |                                       |           |         |
| [mm] SIM translation stage offset | 0                   | 0.01005778216563158  |                                       |           |         |
| [s] Observation start time (MET)  | 225891202.184000    | 225890369.26134      |                                       |           |         |
| Observation start date            | 2005-02-27T11:32:18 | 2005-02-27T11:19:29  |                                       |           |         |
| [s] Observation end time (MET)    | 225896202.184000    | 225896753.47412      |                                       |           |         |
| Observation end date              | 2005-02-27T12:55:38 | 2005-02-27T13:05:53  |                                       |           |         |
| Read mode                         | TIMED               | TIMED                |                                       |           |         |

## 2.3 Aspect



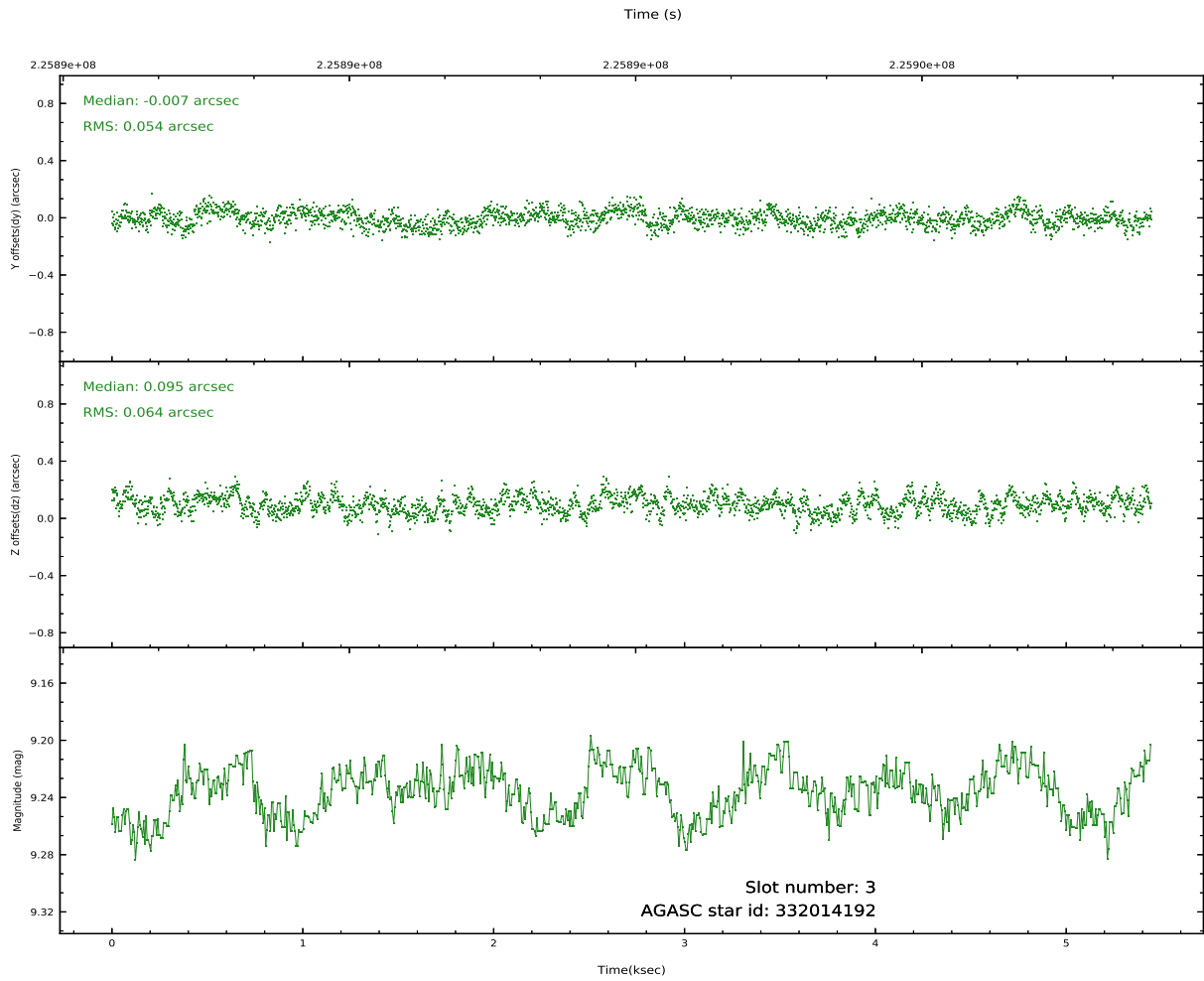
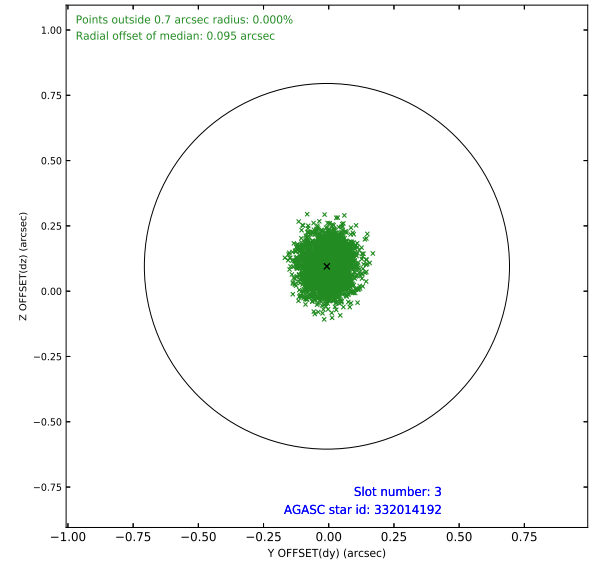
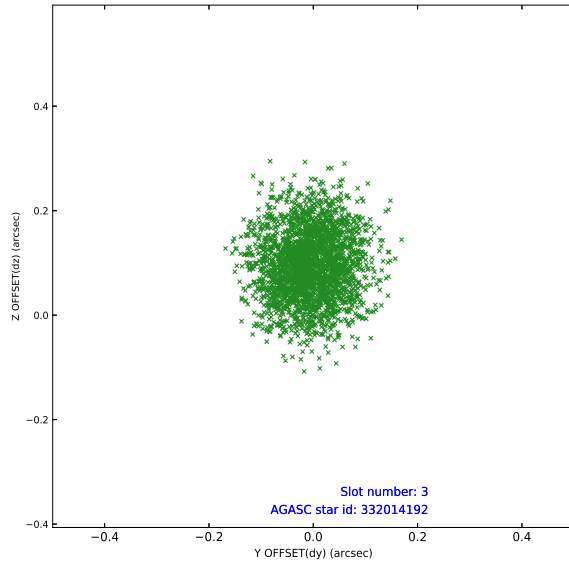


Slot Statistics

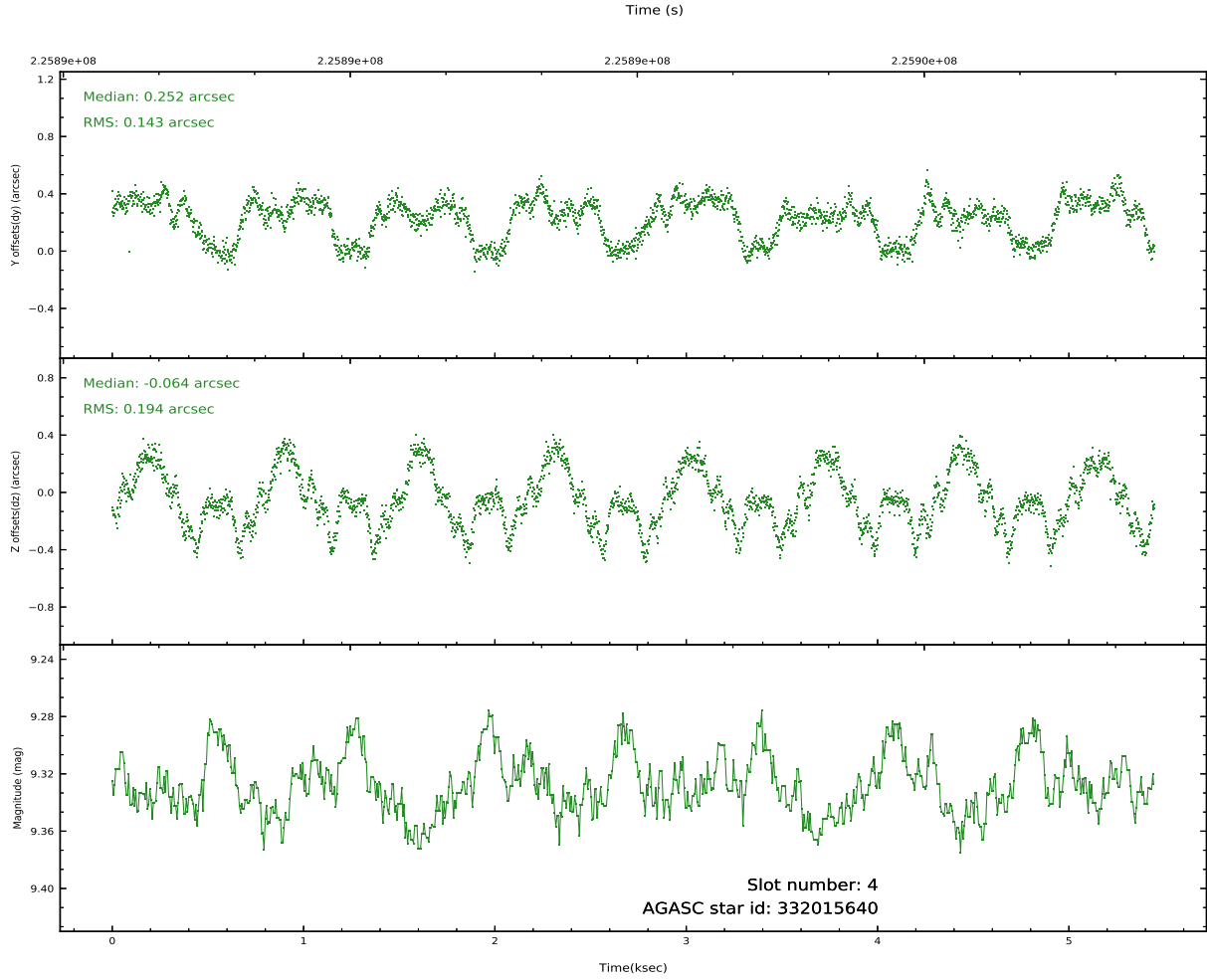
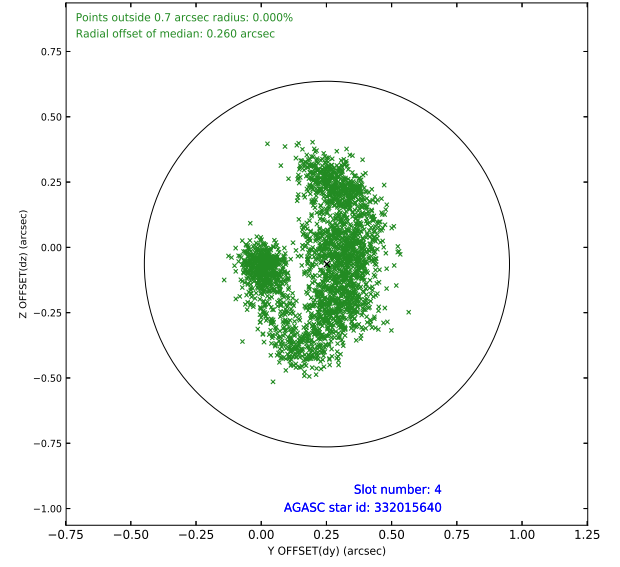
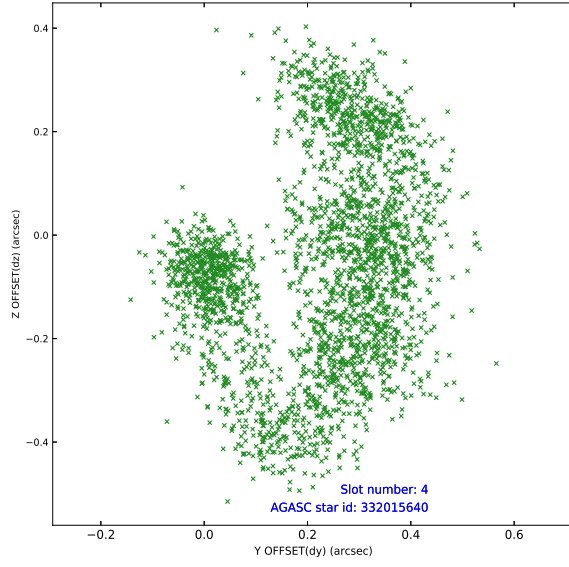
| pt | status | used | id        | mag  | n_pts | frac_pts | med_dy | med_dz | dr1   | dr2   | ra         | dec       | mean_y   | mea   |
|----|--------|------|-----------|------|-------|----------|--------|--------|-------|-------|------------|-----------|----------|-------|
| 0  | FID    |      | ACIS-S-2  | 7.10 | 1328  | 1.000    | -0.064 | -0.082 | 0.006 | 0.010 | 0.000000   | 0.000000  | -759.35  | -1729 |
| 1  | FID    |      | ACIS-S-4  | 7.21 | 1328  | 1.000    | 0.133  | 0.053  | 0.005 | 0.009 | 0.000000   | 0.000000  | 2153.60  | 177   |
| 2  | FID    |      | ACIS-S-5  | 7.23 | 1329  | 1.000    | -0.100 | 0.038  | 0.006 | 0.010 | 0.000000   | 0.000000  | -1810.83 | 172   |
| 3  | GUIDE  | used | 332014192 | 9.24 | 2652  | 1.000    | -0.007 | 0.095  | 0.091 | 0.142 | 190.471528 | 35.049316 | -91.16   | -321  |
| 4  | GUIDE  | used | 332015640 | 9.33 | 2657  | 1.000    | 0.252  | -0.064 | 0.273 | 0.372 | 190.909260 | 35.310478 | -117.79  | -1915 |
| 5  | GUIDE  | used | 332016416 | 9.61 | 2651  | 1.000    | -0.138 | -0.017 | 0.168 | 0.250 | 190.524699 | 35.806671 | 1985.76  | -2095 |
| 6  | GUIDE  | used | 332021344 | 8.31 | 2656  | 1.000    | 0.006  | -0.082 | 0.083 | 0.128 | 189.937719 | 35.086871 | 972.00   | 845   |
| 7  | GUIDE  | used | 332021600 | 7.17 | 2656  | 1.000    | -0.086 | 0.074  | 0.081 | 0.128 | 190.219735 | 34.104561 | -2344.10 | 2333  |

## 2.4 Star Slots

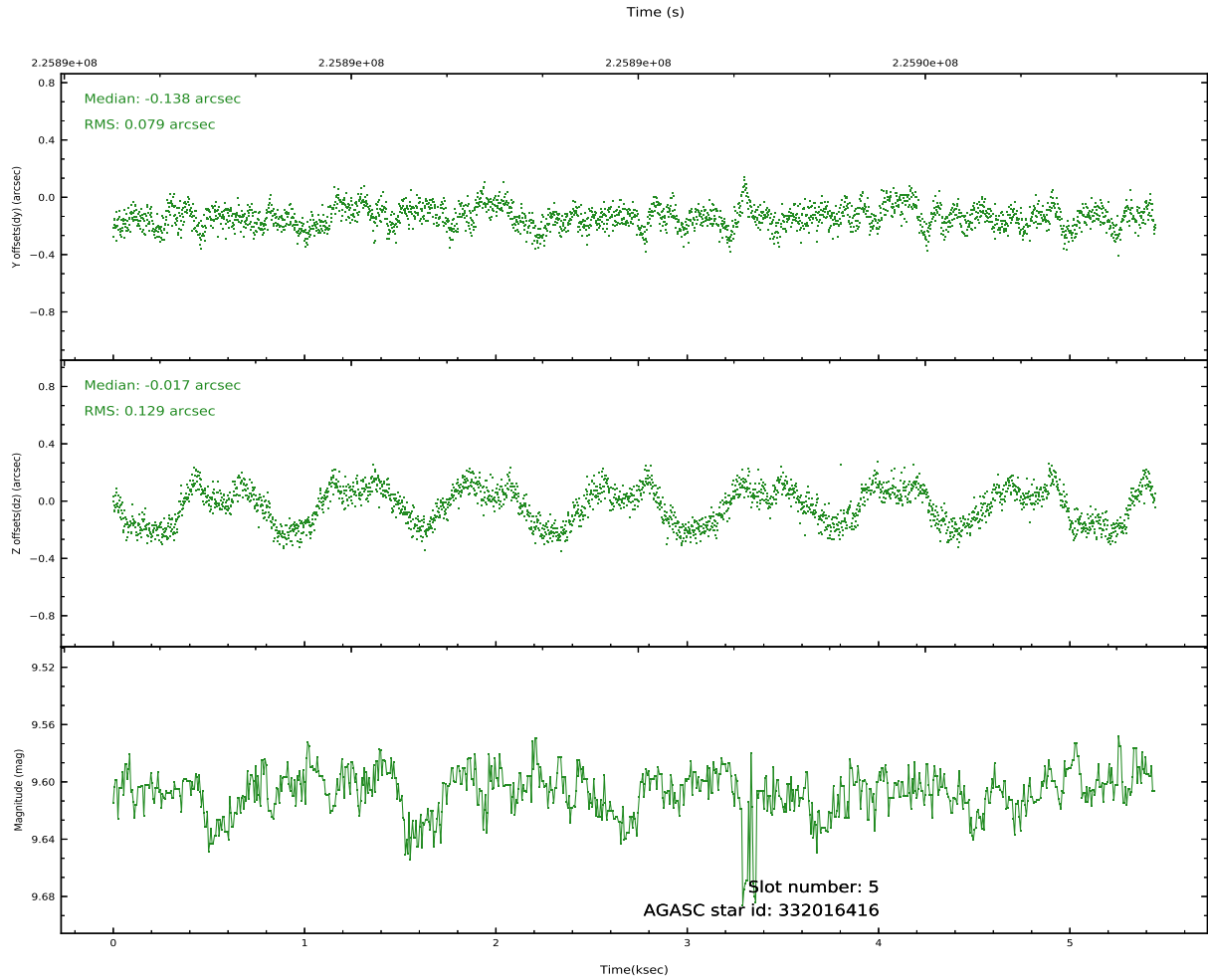
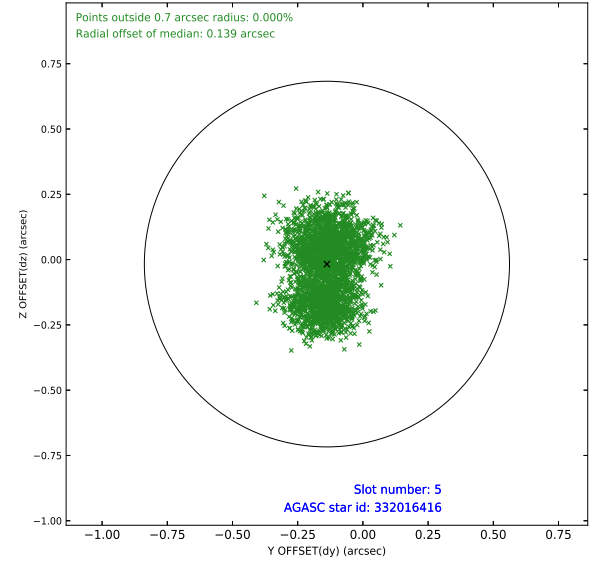
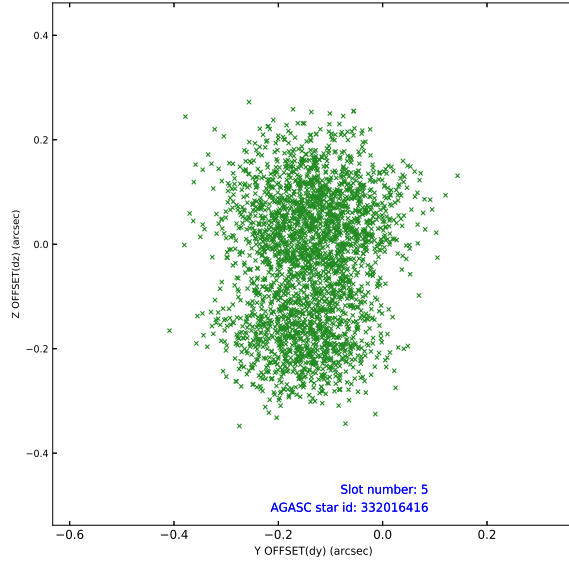
### 2.4.1 Slot 3



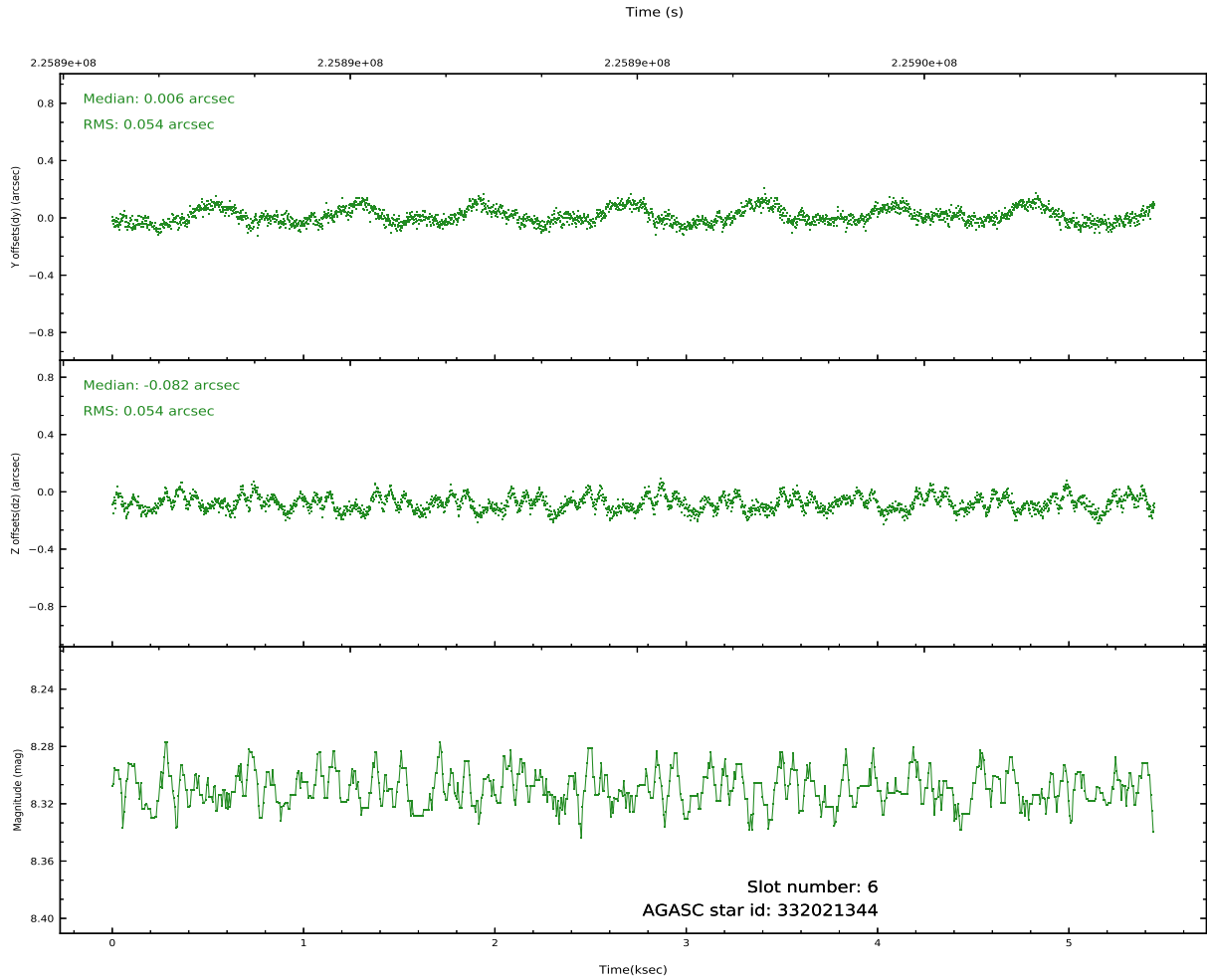
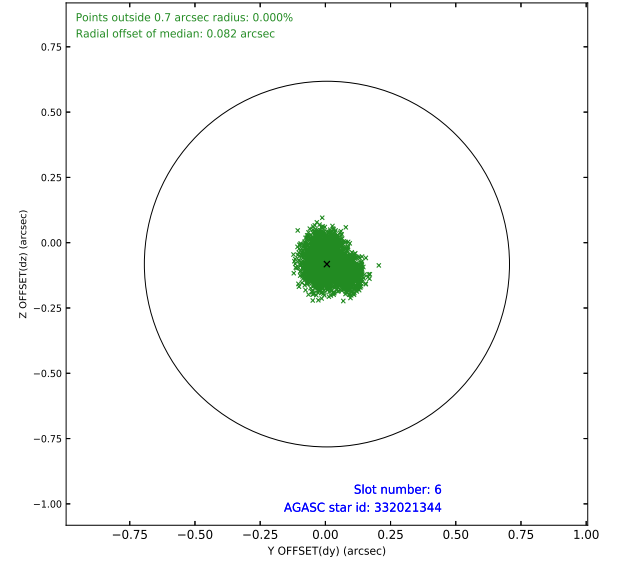
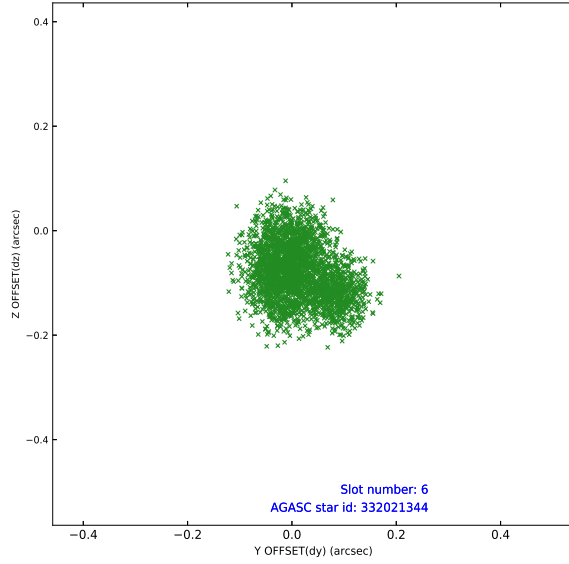
## 2.4.2 Slot 4



### 2.4.3 Slot 5

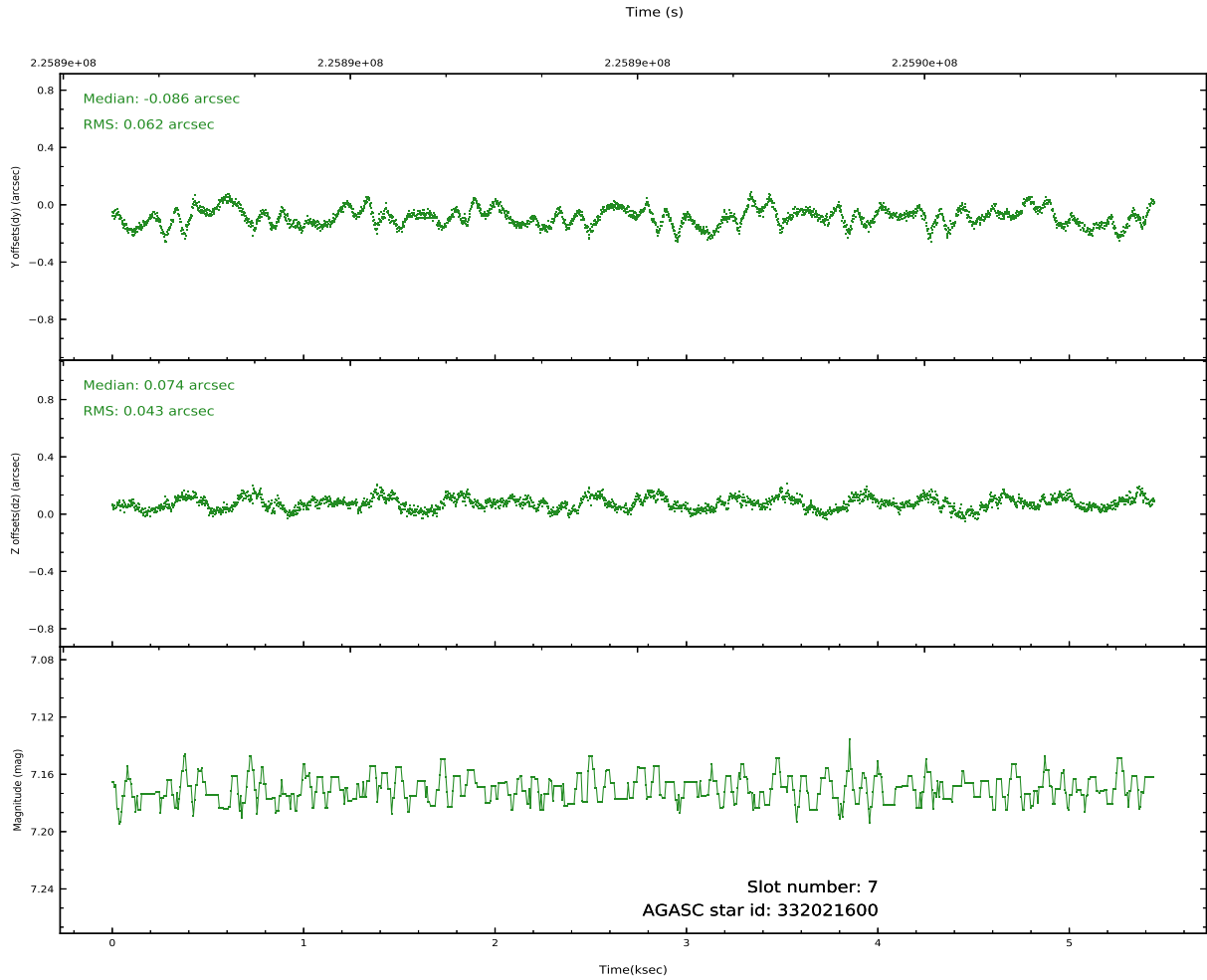
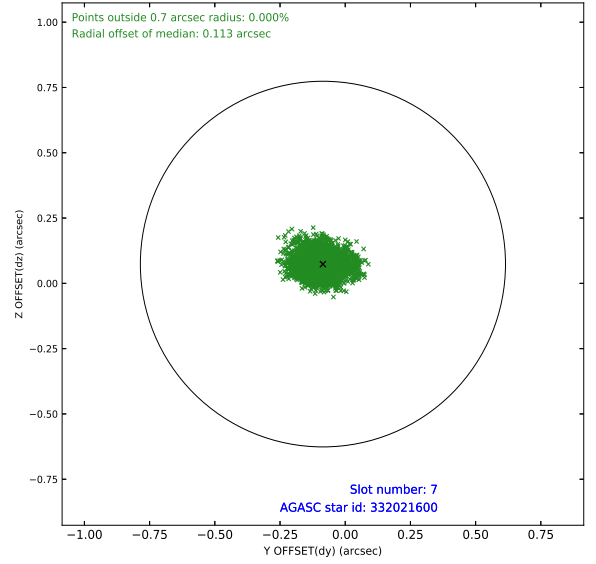
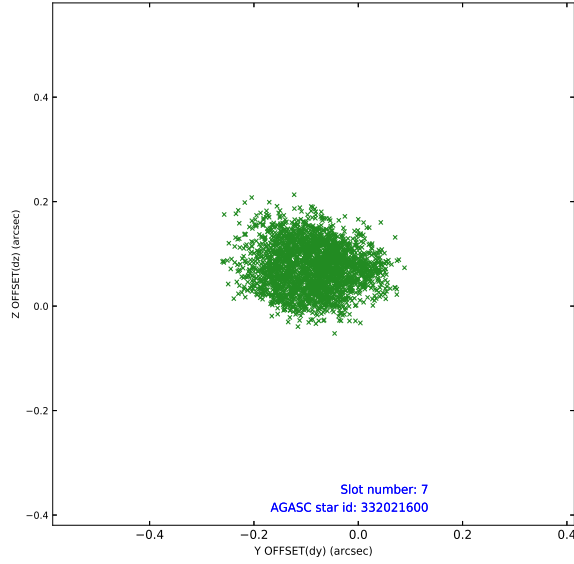


## 2.4.4 Slot 6



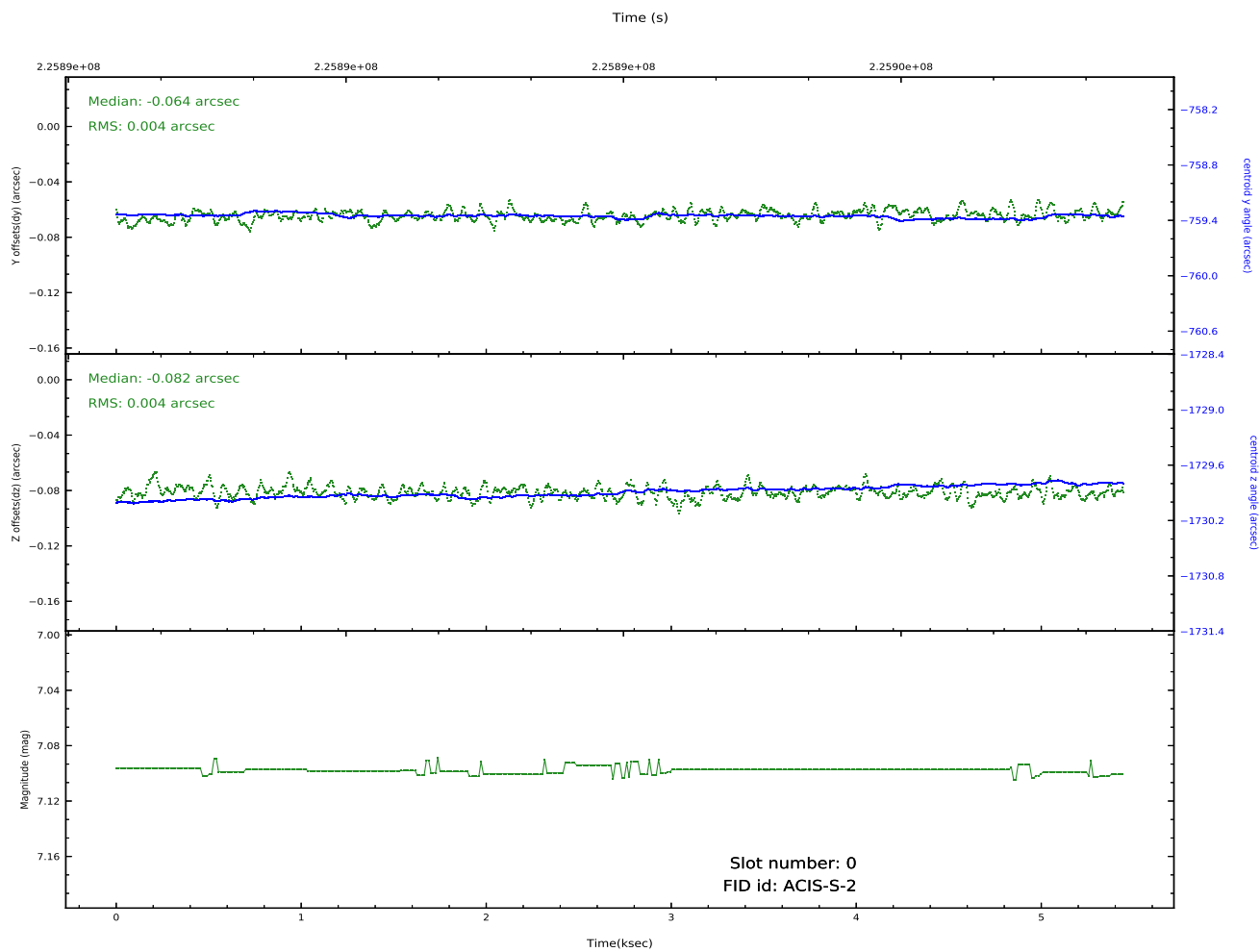
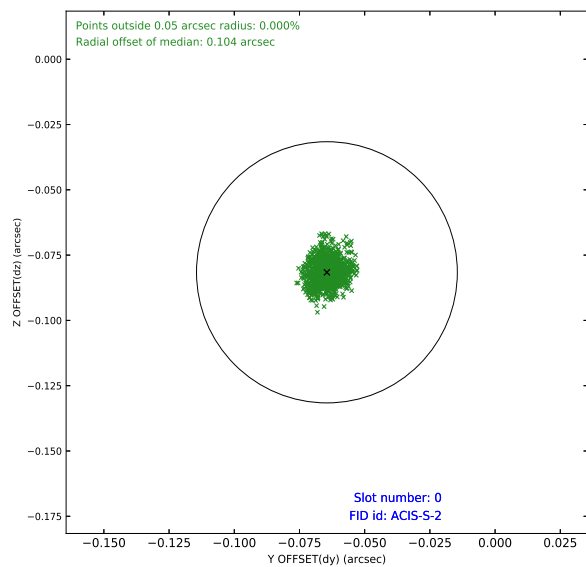
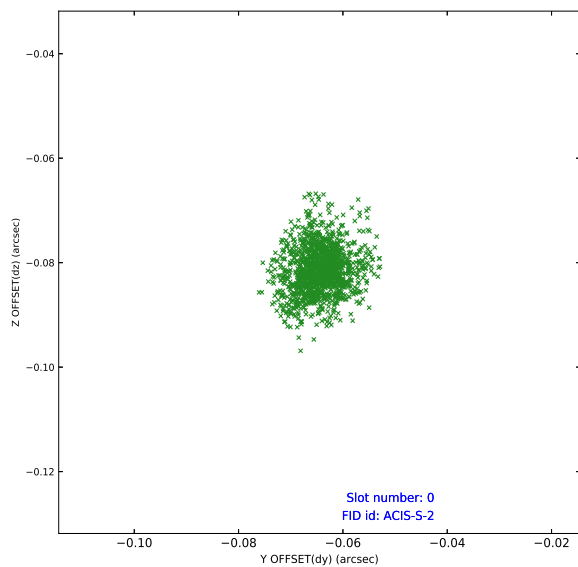


## 2.4.5 Slot 7

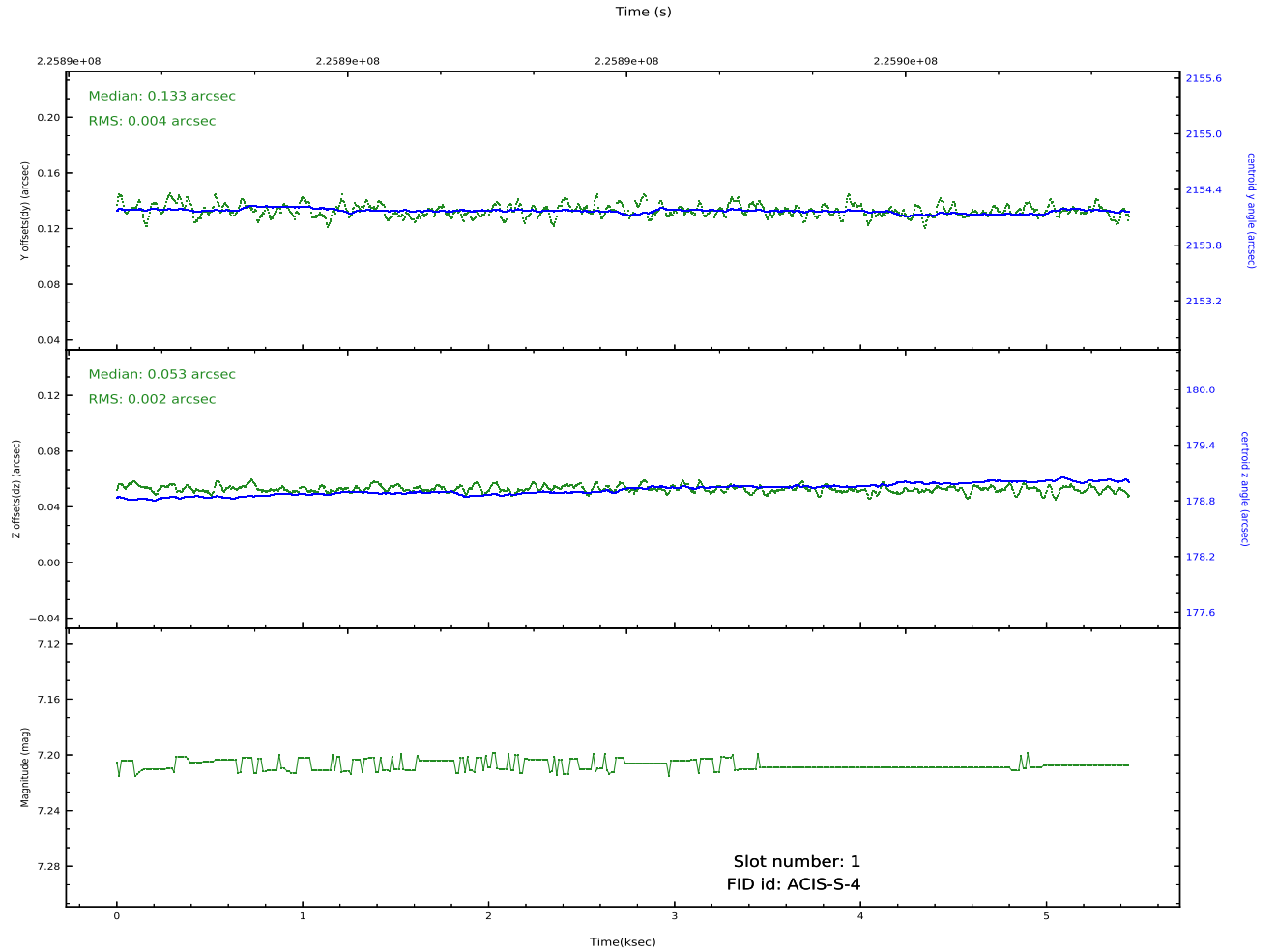
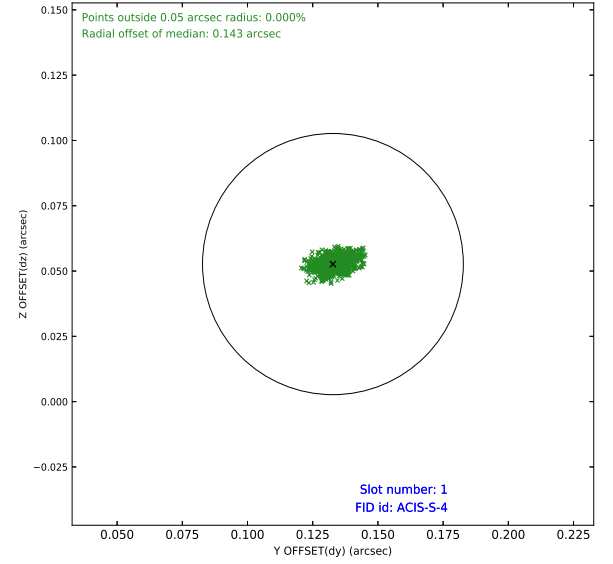
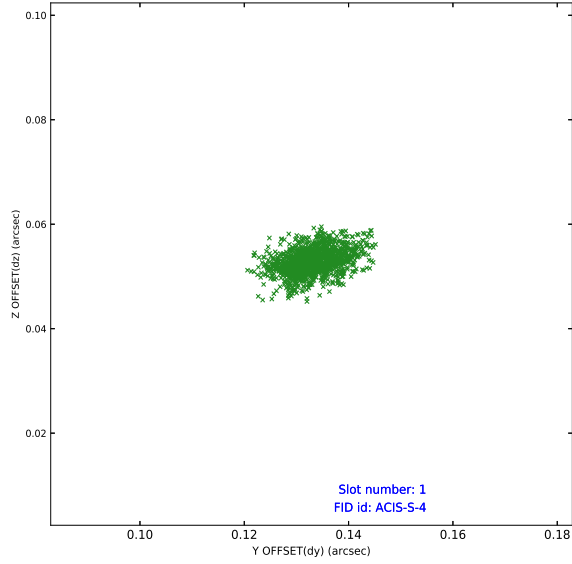


## 2.5 FID Slots

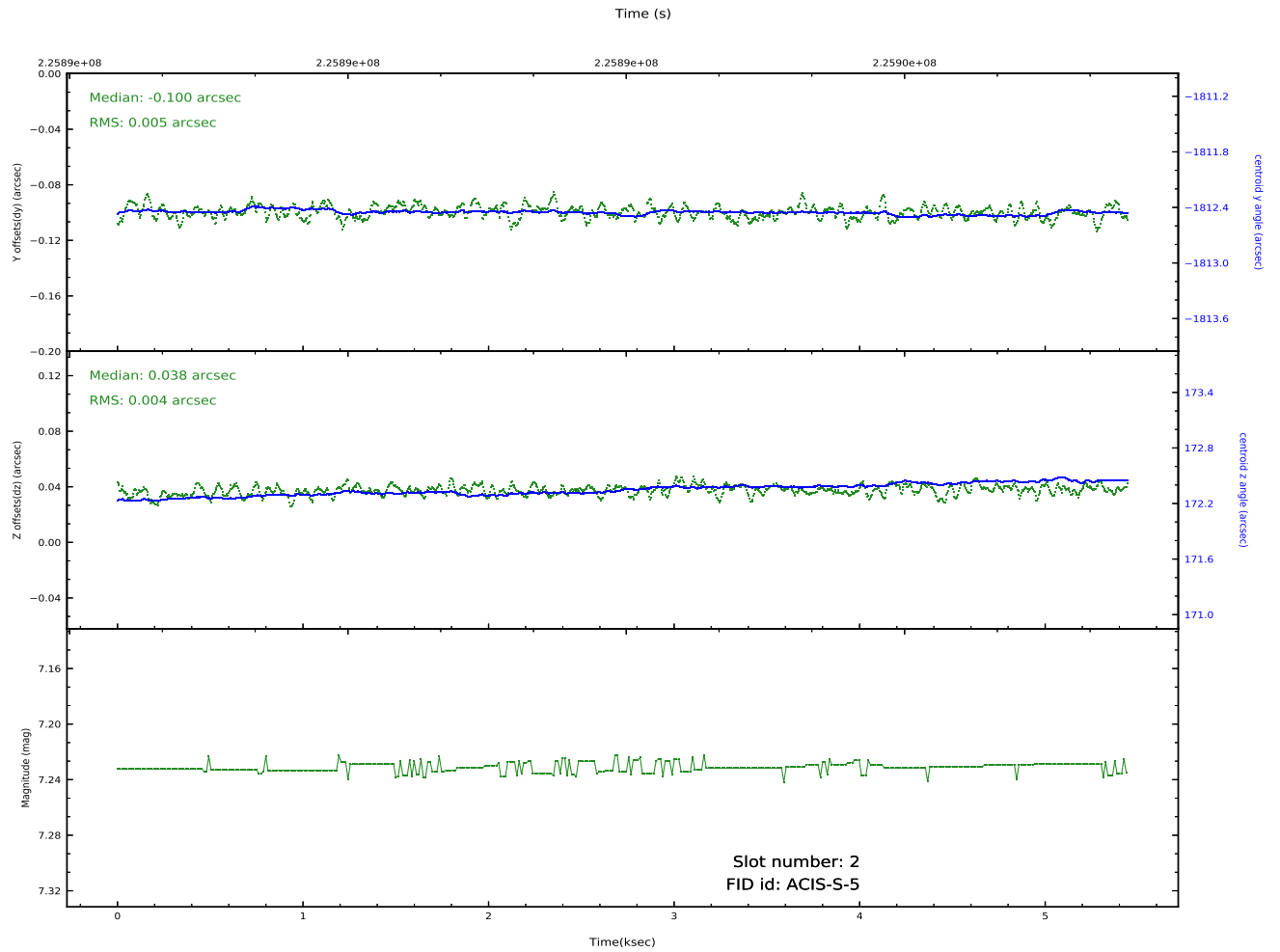
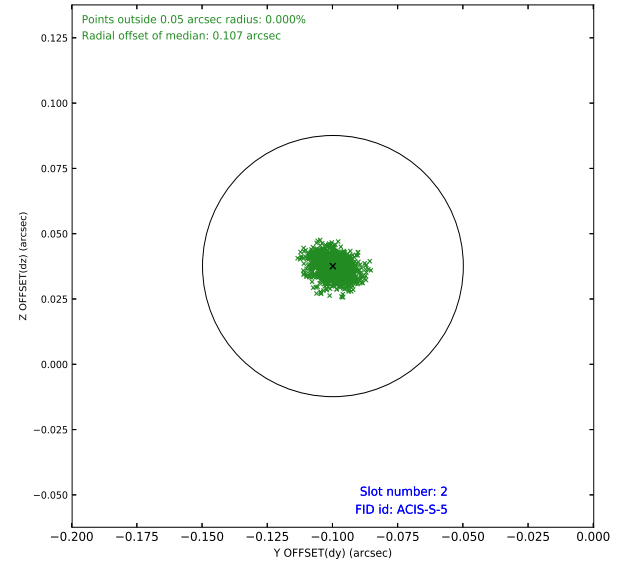
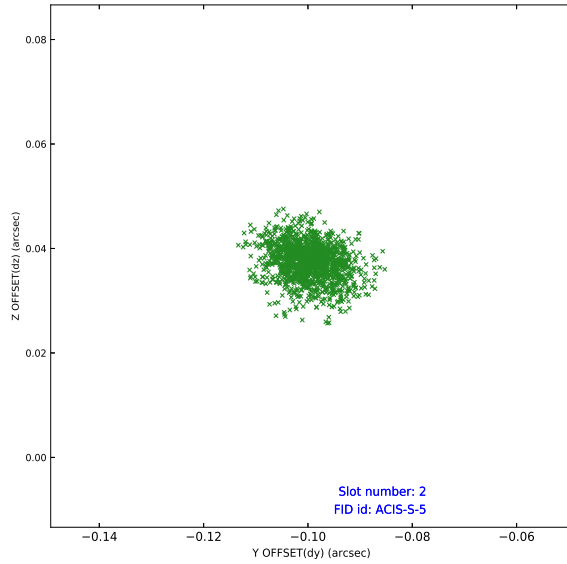
### 2.5.1 Slot 0



## 2.5.2 Slot 1



## 2.5.3 Slot 2



# A Summary

## A.1 Status

|                            |               |
|----------------------------|---------------|
| V&V Scientist              | Beth Sundheim |
| V&V Date (YYYY-MM-DD)      | 2020.10.08    |
| V&V Edition                | 1             |
| V&V Disposition and Status | OK            |
| V&V Charge Time            | 5.081599      |

## A.2 Comments

Joint proposal with NOAO.